

LG Sonic Algae Control Update

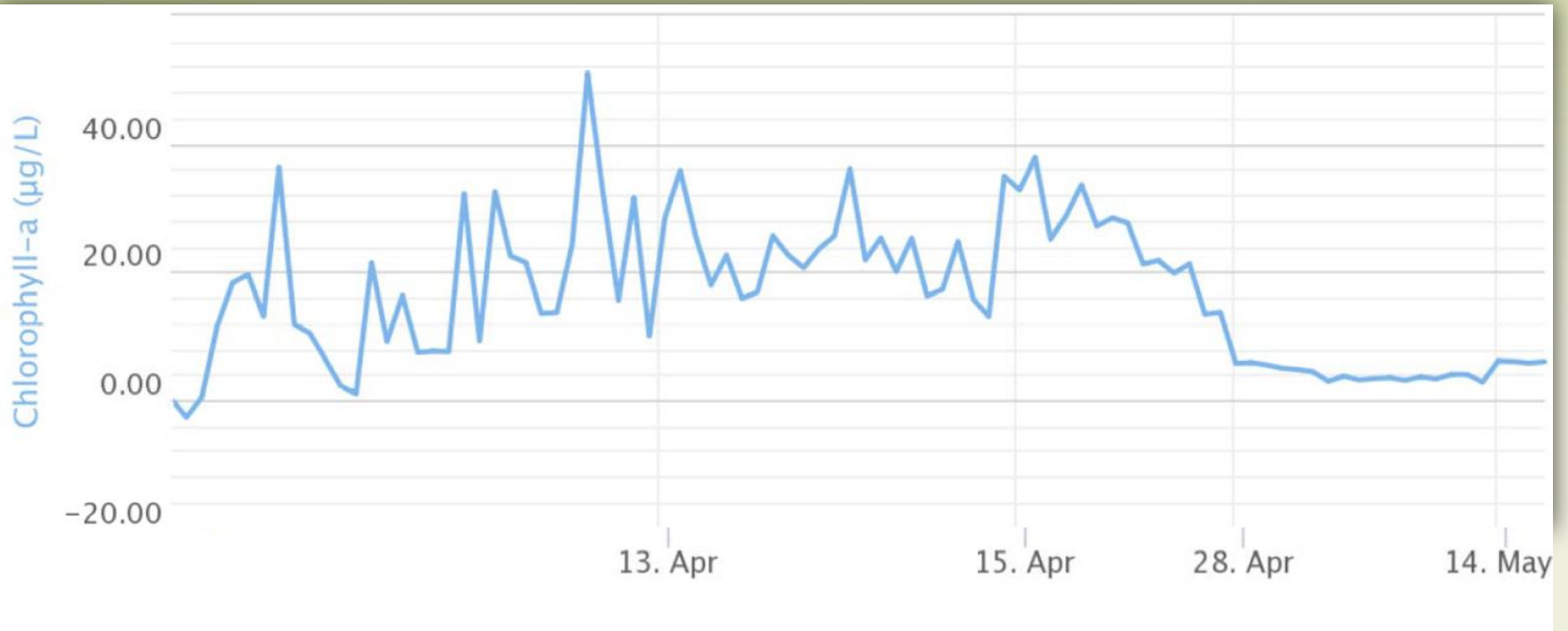


Town of Emmitsburg

Town Meeting: July 10, 2017

Chlorophyll

Indicates algae growth



Chlorophyll Summary

Chlorophyll: Indicates algae growth

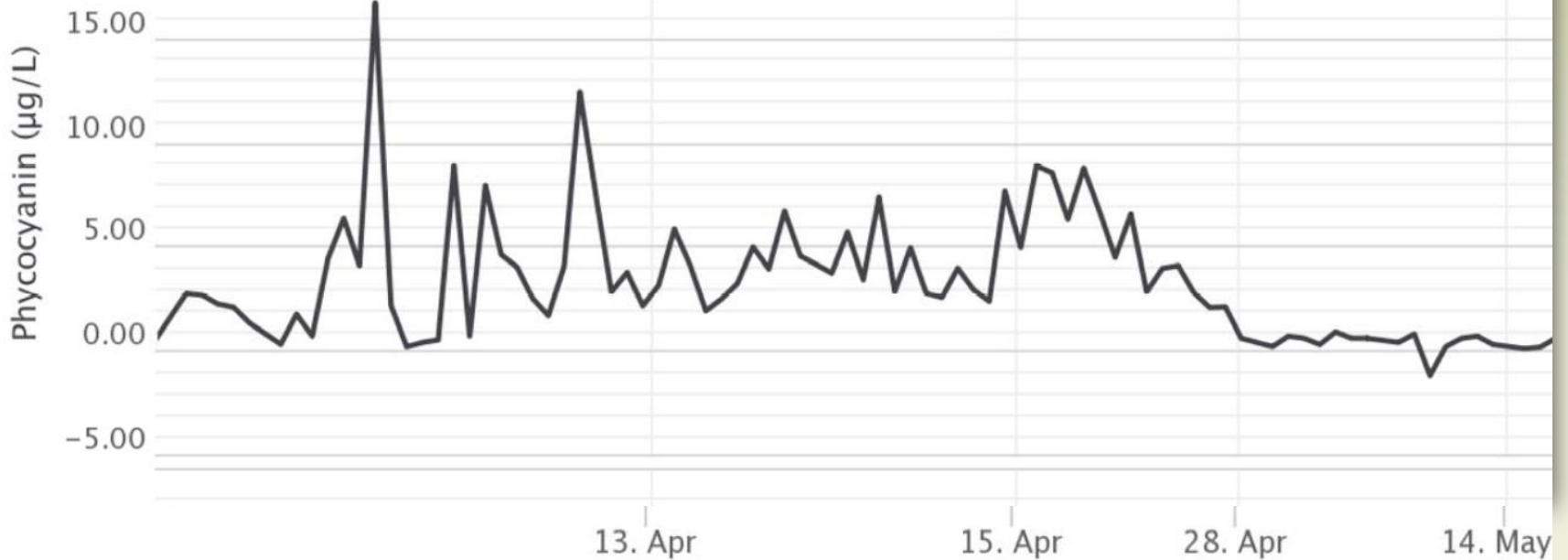
- After Installation: 17 days after installation (on 4/11/2017) the chlorophyll level was averaging around 20 ug/L.
- Current Levels: Just above 0, maybe 5 ug/L (parts per billion). It has been stable thru May 14th.

Summary:

The algae is not producing chlorophyll, which plants need to survive.

Phycocyanin

Causes taste and odor problems in the drinking water



Phycocyanin Summary

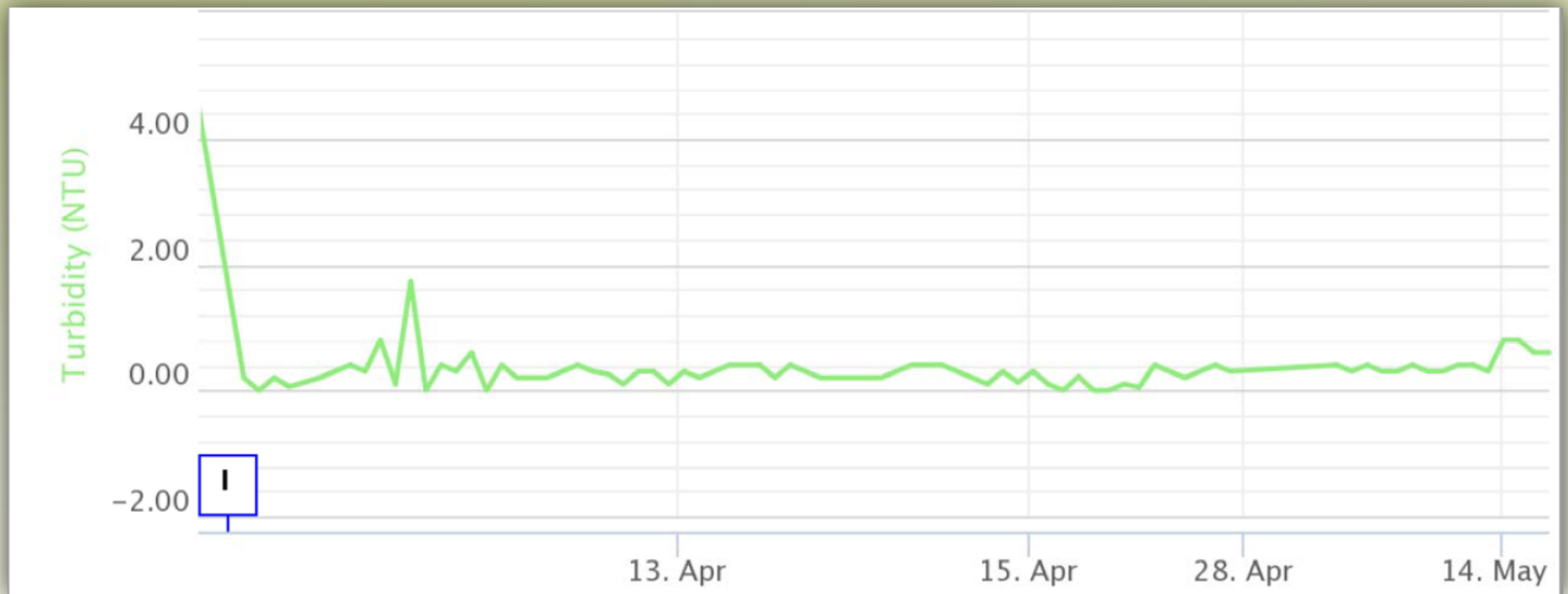
Phycocyanin: Toxins produced by the blue-green algae (and cyannobacteria) that cause taste and odor problems in the drinking water.

- Prior Levels: Approximately 4/5 ug/L
- Current Levels: Near 0.

Decreased

Turbidity

Measures water clarity



Turbidity Summary

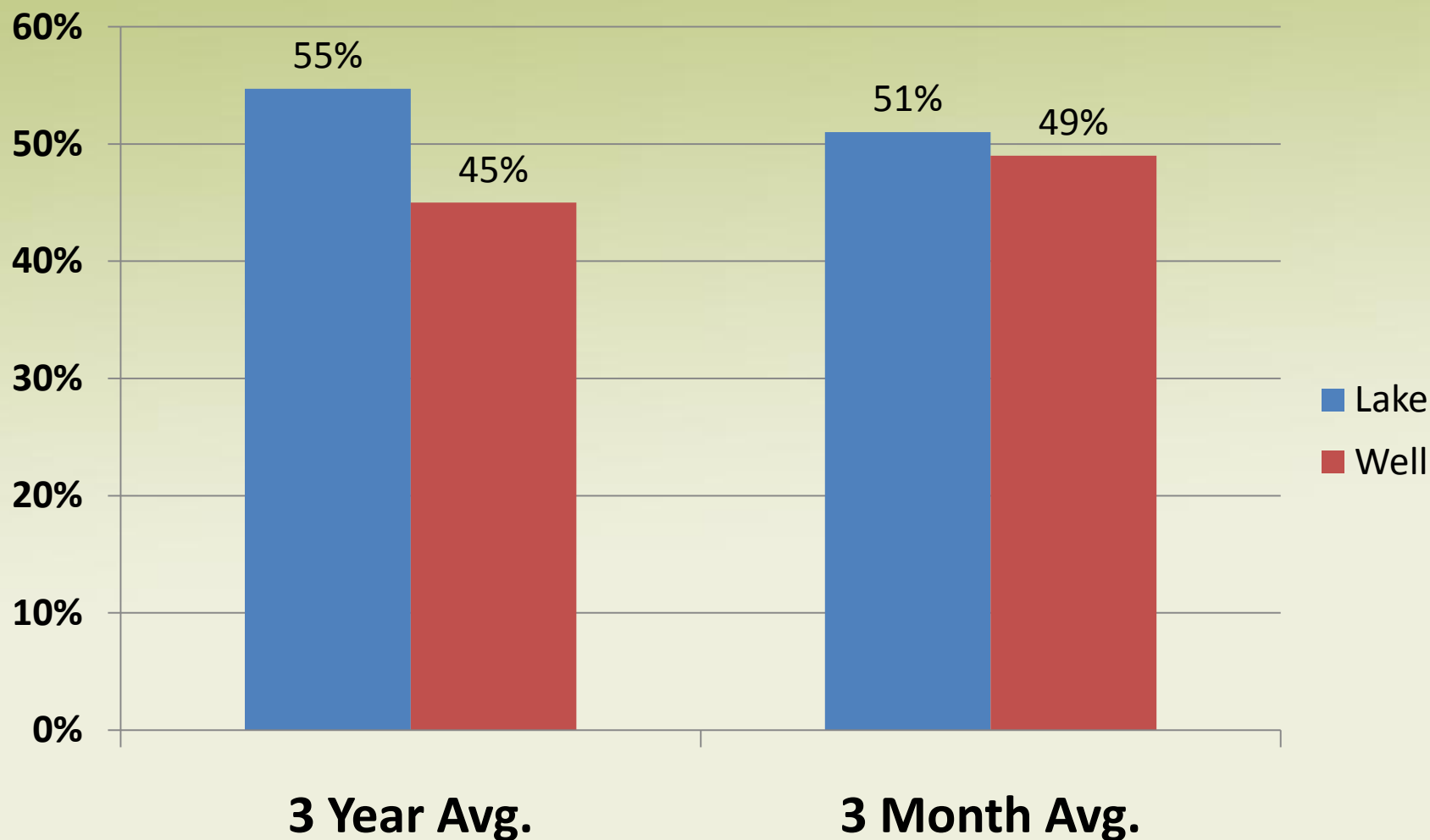
Turbidity: The clarity of the water

- Prior levels: 4.0 NTUs
- Current levels: About <1.0 NTU

Note: Algae blooming produces a turbidity of 5-7 + NTU's.

Decreased

Lake Flow Vs. Well Usage



Getting closer to meeting the Town's 50/50 goal

Coagulant Usage

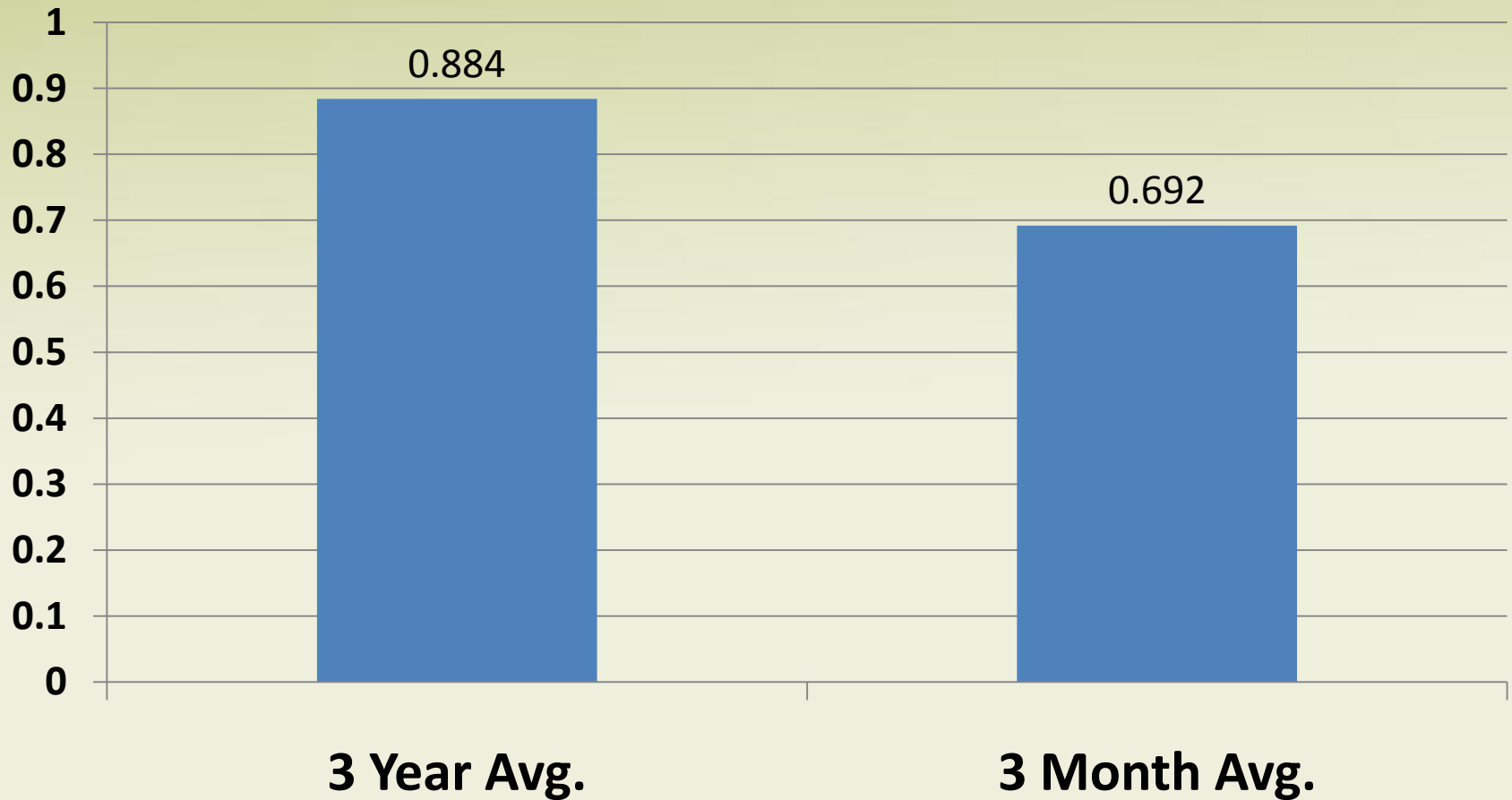
Per Day



Decreased

Backwash Water Usage

Million Gallons/Month



Backwash Summary

- ✓ Gallons used per day is less.
- ✓ *Water Savings:* We now anticipate meeting our goal
 - Prior: 1,292,250 gal/month
 - Current: 600,000 gal/month
- ✓ *Roughing filters:*
 - ✓ Prior: 0.029 mg/day; 8-12lbs differential psi
 - ✓ Current: .0196 mg/day; 5-6lbs differential psi

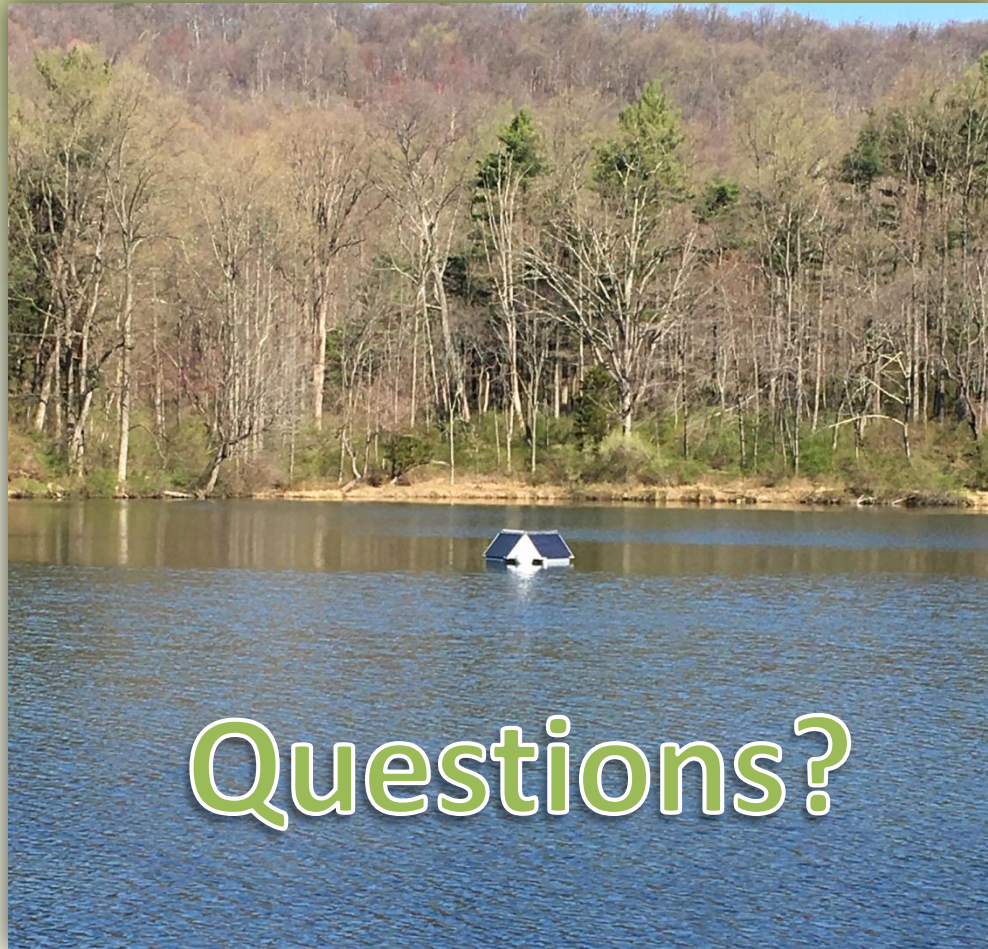
Decreased

Conclusion

Overall good performance since April installation

- ✓ The lake is clearer
- ✓ Making the lake numbers everyday
- ✓ No unexpected filter related overtime
- ✓ NTU's are lower
- ✓ Decreased water usage
- ✓ Decreased coagulant usage
- ✓ Soda Ash and Chlorine are same (more time needed)

More Time Is Needed To Get A More Accurate Analysis



Questions?